RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

| Application Serial Number: | 09/870.884B |
|----------------------------|-------------|
| Source: | IFW/6 |
| Date Processed by STIC: | 10/26/05 |
| | / / |

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IFW16

RAW SEQUENCE LISTING DATE: 10/26/2005
PATENT APPLICATION: US/09/870,884B TIME: 11:34:16

Input Set : A:\Sequence Listing new 10-20-05.txt

Output Set: N:\CRF4\10262005\1870884B.raw

```
3 <110> APPLICANT: Hoeg-Jensen, Thomas
             Havelund, Svend
      5
             Markussen, Jan
      6
             Ostergaard, Soren
      7
             Ridderberg, Signe
              Balschmidt, Per
     9
              Schaffer, Lauge
              Jonassen, Ib
     12 <120> TITLE OF INVENTION: Glucose Dependent Release of Insulin from Glucose Sensing
Insulin
     13
              Derivatives
     15 <130> FILE REFERENCE: 6213.200-US
     17 <140> CURRENT APPLICATION NUMBER: 09/870,884B
     18 <141> CURRENT FILING DATE: 2001-05-31
     20 <150> PRIOR APPLICATION NUMBER: US 60/213,375
     21 <151> PRIOR FILING DATE: 2000-06-23
     23 <150> PRIOR APPLICATION NUMBER: Denmark PA 2000 00858
     24 <151> PRIOR FILING DATE: 2000-06-02
    26 <160> NUMBER OF SEQ ID NOS: 18
    28 <170> SOFTWARE: PatentIn version 3.3
    30 <210> SEQ ID NO: 1
    31 <211> LENGTH: 21
    32 <212> TYPE: PRT
    33 <213> ORGANISM: Homo sapiens
     35 <400> SEQUENCE: 1
    37 Gly Ile Val Glu Gln Cys Cys Thr Ser Ile Cys Ser Leu Tyr Gln Leu
    38 1
                                            10
    41 Glu Asn Tyr Cys Asn
                    20
    45 <210> SEQ ID NO: 2
    46 <211> LENGTH: 30
    47 <212> TYPE: PRT
    48 <213> ORGANISM: Homo sapiens
    50 <400> SEQUENCE: 2
    52 Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr
                                                                 15
    56 Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Thr
    57
                    20
                                        25
    60 <210> SEQ ID NO: 3
    61 <211> LENGTH: 30
    62 <212> TYPE: PRT
    63 <213> ORGANISM: Homo sapiens
    65 <400> SEQUENCE: 3
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67 Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr

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68 1
                                                            15
71 Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Asp Lys Thr
               20
75 <210> SEQ ID NO: 4
76 <211> LENGTH: 30
77 <212> TYPE: PRT
78 <213> ORGANISM: Homo sapiens
80 <400> SEQUENCE: 4
82 Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr
86 Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Lys Pro Thr
              20
90 <210> SEQ ID NO: 5
91 <211> LENGTH: 21
92 <212> TYPE: PRT
93 <213> ORGANISM: Homo sapiens
95 <400> SEQUENCE: 5
97 Gly Ile Val Glu Gln Cys Cys Thr Ser Ile Cys Ser Leu Tyr Gln Leu
                                        10
101 Glu Asn Tyr Cys Gly
102
                20
105 <210> SEQ ID NO: 6
106 <211> LENGTH: 30
107 <212> TYPE: PRT
108 <213> ORGANISM: Homo sapiens
110 <400> SEQUENCE: 6
112 Phe Val Lys Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr
116 Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Ile Lys Thr
117
                20
                                     25
120 <210> SEQ ID NO: 7
121 <211> LENGTH: 21
122 <212> TYPE: PRT
123 <213> ORGANISM: Homo sapiens
125 <400> SEQUENCE: 7
127 Gly Ile Val Glu Gln Cys Cys Thr Ser Ile Cys Ser Leu Tyr Gln Leu
128 1
131 Glu Asn Tyr Cys Asp
132
                20
135 <210> SEQ ID NO: 8
136 <211> LENGTH: 29
137 <212> TYPE: PRT
138 <213> ORGANISM: Homo sapiens
140 <400> SEQUENCE: 8
142 Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr
                    5
                                         10
146 Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys
                20
150 <210> SEQ ID NO: 9
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151 <211> LENGTH: 30
     152 <212> TYPE: PRT
     153 <213> ORGANISM: Homo sapiens
     155 <400> SEQUENCE: 9
     157 Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr
     158 1
     161 Leu Val Cys Gly Glu Arg Gly Phe Phe Phe Thr Pro Lys Thr
     162
                     20
                                         25
     165 <210> SEQ ID NO: 10
     166 <211> LENGTH: 30
     167 <212> TYPE: PRT
     168 <213 > ORGANISM: Homo sapiens
     171 <220> FEATURE:
     172 <221> NAME/KEY: MISC FEATURE
     173 <222> LOCATION: (30)..(30)
     174 <223> OTHER INFORMATION: x = ornithine
     176 <400> SEQUENCE: 10
     178 Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr
     179 1
W--> 182 Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Xaa
     183
                     20
     186 <210> SEQ ID NO: 11
     187 <211> LENGTH: 30
     188 <212> TYPE: PRT
     189 <213> ORGANISM: Homo sapiens
     192 <220> FEATURE:
     193 <221> NAME/KEY: MISC FEATURE
     194 <222> LOCATION: (30)..(30)
     195 <223> OTHER INFORMATION: x = diaminopropionic acid
     197 <400> SEQUENCE: 11
     199 Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr
W--> 203 Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Xaa
     204
     207 <210> SEQ ID NO: 12
     208 <211> LENGTH: 30
    209 <212> TYPE: PRT
     210 <213> ORGANISM: Homo sapiens
    212 <400> SEQUENCE: 12
    214 Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr
                                             10
    218 Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Lys
    219
                   20
    222 <210> SEQ ID NO: 13
    223 <211> LENGTH: 31
    224 <212> TYPE: PRT
    225 <213> ORGANISM: Homo sapiens
    227 <400> SEQUENCE: 13
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229 Pro Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu

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Input Set: A:\Sequence Listing new 10-20-05.txt
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```
230 1
     233 Tyr Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Thr
     237 <210> SEQ ID NO: 14
     238 <211> LENGTH: 30
     239 <212> TYPE: PRT
     240 <213> ORGANISM: Homo sapiens
     242 <400> SEQUENCE: 14
     244 Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr
     248 Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Asp
     249
                     20
     252 <210> SEQ ID NO: 15
     253 <211> LENGTH: 30
     254 <212> TYPE: PRT
     255 <213> ORGANISM: Homo sapiens
     257 <400> SEQUENCE: 15
     259 Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr
     260 1
     263 Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Glu
     264
                     20
                                         25
     267 <210> SEQ ID NO: 16
     268 <211> LENGTH: 30
     269 <212> TYPE: PRT
     270 <213> ORGANISM: Homo sapiens
     273 <220> FEATURE:
     274 <221> NAME/KEY: MISC FEATURE
     275 <222> LOCATION: (30)..(30)
     276 <223> OTHER INFORMATION: x = 0-aminoserine(BOC)
     278 <400> SEQUENCE: 16
    280 Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr
  -> 284 Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Xaa
    285
                     20
                                         25
    288 <210> SEQ ID NO: 17
    289 <211> LENGTH: 30
    290 <212> TYPE: PRT
    291 <213> ORGANISM: Homo sapiens
    294 <220> FEATURE:
    295 <221> NAME/KEY: MISC FEATURE
    296 <222> LOCATION: (30)..(30)
    297 <223> OTHER INFORMATION: x = diaminobutyric acid
    299 <400> SEQUENCE: 17
    301 Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr
    302 1
                         5
W--> 305 Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Xaa
    306
    309 <210> SEQ ID NO: 18
    310 <211> LENGTH: 7
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RAW SEQUENCE LISTING

DATE: 10/26/2005 PATENT APPLICATION: US/09/870,884B TIME: 11:34:16

Input Set : A:\Sequence Listing new 10-20-05.txt

Output Set: N:\CRF4\10262005\1870884B.raw

- 311 <212> TYPE: PRT
- 312 <213> ORGANISM: homo sapien
- 315 <220> FEATURE:
- 316 <221> NAME/KEY: MISC_FEATURE
- 317 <222> LOCATION: (4)..(4)
- 318 <223> OTHER INFORMATION: Xaa=NBPhe
- 320 <220> FEATURE:
- 321 <221> NAME/KEY: MISC FEATURE
- 322 <222> LOCATION: (7)..(7)
- 323 <223> OTHER INFORMATION: Xaa=Lys(lithocholoyl)
- 325 <400> SEQUENCE: 18
- W--> 327 Gly Phe Phe Xaa Thr Pro Xaa
 - 328 1

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 10/26/2005 PATENT APPLICATION: US/09/870,884B

TIME: 11:34:17

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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:10; Xaa Pos. 30 // Seq#:11; Xaa Pos. 30/ Seq#:16; Xaa Pos. 30 Seq#:17; Xaa Pos. 30 Seq#:18; Xaa Pos. 4,7

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/870,884B

DATE: 10/26/2005 TIME: 11:34:17

Input Set : A:\Sequence Listing new 10-20-05.txt

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| L:182 | M:341 | W: | (46) | "n" | or | "Xaa" | used, | for | SEQ | ID#:10 | after | pos.:16 |
|-------|-------|----|------|-----|----|-------|-------|-----|-----|--------|-------|---------|
| L:203 | M:341 | W: | (46) | "n" | or | "Xaa" | used, | for | SEQ | ID#:11 | after | pos.:16 |
| L:284 | M:341 | W: | (46) | "n" | or | "Xaa" | used, | for | SEQ | ID#:16 | after | pos.:16 |
| L:305 | M:341 | W: | (46) | "n" | or | "Xaa" | used, | for | SEQ | ID#:17 | after | pos.:16 |
| L:327 | M:341 | W: | (46) | "n" | or | "Xaa" | used, | for | SEQ | ID#:18 | after | pos.:0 |